EX PARTE OR LATE FILED

PATTON BOGGS LLP
ATTORNEYS AT LAW

2550 M Street, NW
Washington, DC 20037-1350
202-457-6000

Facsimile 202-457-6315



June 28, 1999

Paul C. Besozzi
(202) 457-5292
pbesozzi@pattonboggs.com

Magalie Roman Salas
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

**Re: Ex parte Presentation – Global American Technology Corp. - CC Docket No. 94-102**

Dear Ms. Salas:

In accordance with Section 1.1206 of the Commission's Rules, enclosed are two copies of an ex parte presentation made by Global American Technology Corporation to staff members of the Office of Engineering and Technology and the Wireless Telecommunications Bureau on June 25, 1999. The presentation related to technical issues involved in implementing E911.

Should you have any questions, please contact the undersigned counsel.

Sincerely yours,

Paul C. Besozzi
PCB/lyt

No. of Copies rec'd 0+1
List ABCDE

Doc. 448210

# The Global American Technology Corporation (GATCO)

## WIRELESS 9-1-1 Problems

### and GATCO's Proposed Solutions

# COMPANY PROFILE

The Global American Technology Corporation (GATCO) is a data and telephony communications company that develops and manufactures proprietary technologies for use in wireless telecommunications.

GATCO's Mission is the development of technology that utilizes wireless communications capacity to deliver cost-effective solutions for the needs of the Transportation and Communication Industry and General Consumer Market.
Please visit us at our website 

@ www.gatco-tech.com

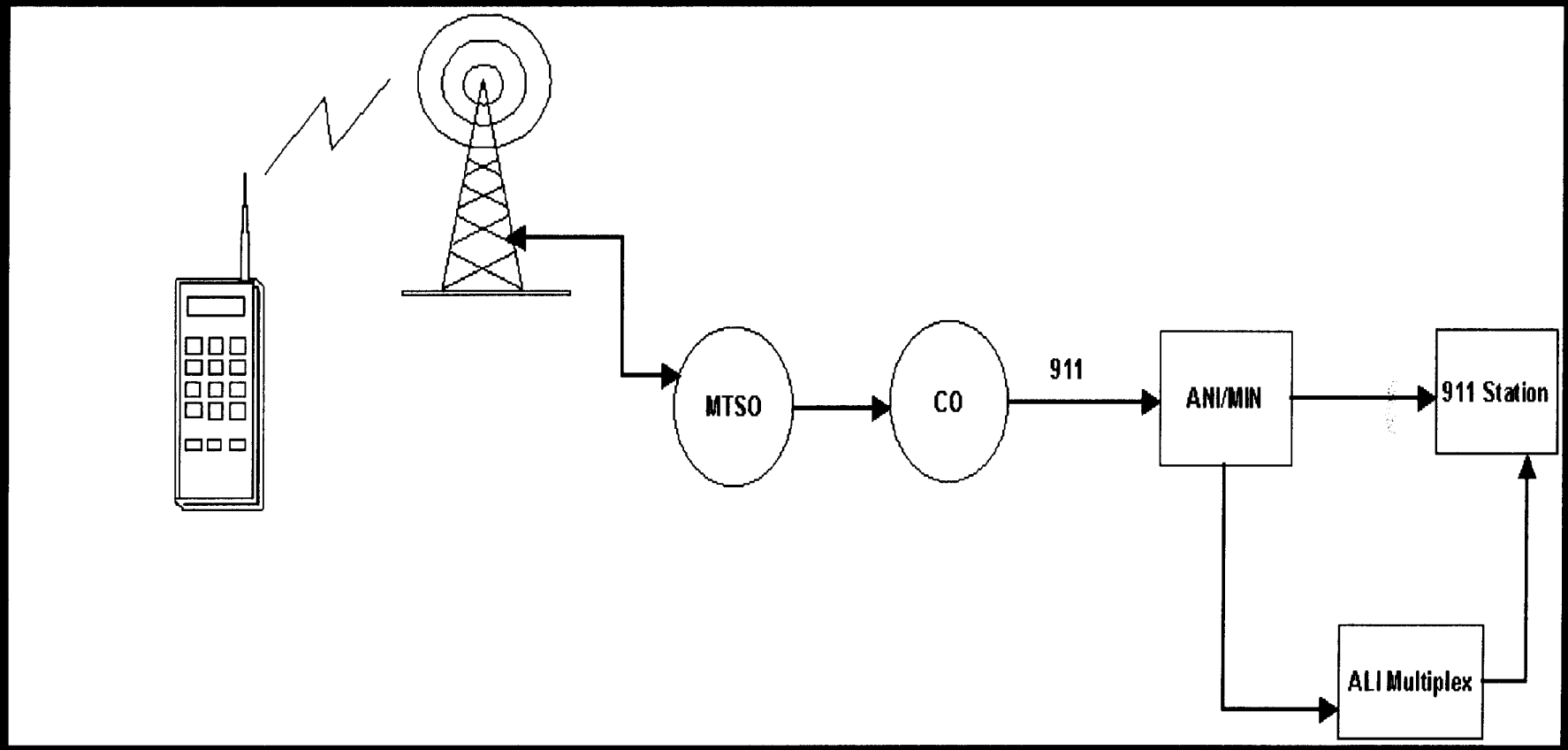
# WIRELESS 9-1-1

## Facts and Statistics

- There are 69.2 million cellular/PCS subscribers in the United States
- In 1998 alone there was a 25% increase in the number of wireless mobile users; the number is expected to DOUBLE in the next 5 years
- 75% consider SAFETY as an important factor in the wireless purchase decision
- Growth in wireless usage has created a gap in the performance of the serving technology
- Usage time of a cell phone -- 18 months to 3 years

- 35.8 million wireless calls to 9-1-1 are being placed each year
- 25% of wireless callers to 9-1-1 do NOT know their location
- The methods of transferring 9-1-1 calls from police dispatcher to PSAP are often slow and inadequate
- FCC passed Docket 94-102 to improve servicing wireless 9-1-1 calls
- Its quick implementation is crucial to avoid chaos in the 9-1-1 system

# Cellular 9-1-1 Network Architecture



# E9-1-1 Network Problems

- *The inability to deliver information through the telephone network with inband signaling".* **Lucent Technologies**
- Excessive Call Completion Intervals
- Callers Identified by an 8-digit Number
- Support of Evolving Technologies and FCC Mandates
  - Wireless E911 with location information
  - PCS Wireless
  - Number Portability
- Routing Limitations and Number of NPAs supported
- Data over Voice
  - Data limited

# UNDERLYING ISSUES

- CONTINUED STEEP GROWTH OF WIRELESS/CELL PHONE MARKET -- CORRESPONDING GROWTH OF WIRELESS ORIGINATED 9-1-1 CALLS: 30M+ PER YEAR
- ISSUES:
  - ROUTING OF CALLS
  - LOCATION OF CALLER
  - INTEGRITY OF DATABASE

# PHASE I

- CARRIER MUST DELIVER 10 DIGIT ANI OF THE CALLER
- CARRIER MUST DELIVER THE LOCATION OF THE CELL SITE
- SOME CARRIERS MAY BE ABLE TO IDENTIFY THE RELATIVE DIRECTION OF THE CALLER

***THE FOCUS OF PHASE I IS NOT REALLY ON LOCATION, BUT ON INSURING PROPER ROUTING TO THE APPROPRIATE PSAP. IT ALSO ESTABLISHES THE REQUIREMENT FOR CALL BACK FROM THE PSAP***

# PHASE II

- SUBJECT TO THE SAME CAVEATS AS PHASE I, CARRIERS "ARE REQUIRED TO ACHIEVE THE CAPABILITY TO IDENTIFY THE LATITUDE AND LONGITUDE OF A MOBILE UNIT MAKING A 9-1-1 CALL WITHIN A RADIUS OF NO MORE THAN 125 METERS IN 67% OF ALL CASES"

*PHASE II FOCUSES ON DISCRETE LOCATION AND AS SUCH WILL BE THE DRIVING FACTOR FOR A GREAT DEAL OF CHANGE IN THE 911 ARENA. PHASE II WILL BE THE STIMULUS FOR MAJOR CHANGE OUTS OF INFRASTRUCTURE*

# PHASE II

- **IMPLEMENTATION MAY REQUIRE**
  - THE PREREQUISITE OF A FUNDING MECHANISM
  - DEPLOYMENT OF LOCATION TECHNOLOGY BY WIRELESS CARRIERS
  - CHANGES IN SELECTIVE ROUTING/DATABASE/MSAG PROCEDURES AND OPERATIONS
  - CHANGES IN ASSIGNED RESPONSIBILITIES FOR WIRELESS PSAPS (I.E. MOVE FROM STATE POLICE)
  - UPGRADES OF PSAPS
    - **ANI/ALI CONTROLLERS**
    - **WORK STATIONS WILL REQUIRE LARGER SCREENS AND GRAPHIC DISPLAYS**
    - **UPGRADES OR NEW IMPLEMENTATIONS OF CAD**
    - **INTEGRATION OF SYSTEMS**
    - **GREATER NEED FOR MORE ADVANCED TELCO SERVICES LIKE ISDN AND SS7**

# PHASE II

- MORE A DEPLOYMENT PROBLEM THAN AN INVENTION PROBLEM
- REALLY AN OPPORTUNITY:
  - PSAP CAN MOVE UP TO THE NEXT GENERATION OF TECHNOLOGY AND PROVIDE A MUCH HIGHER GRADE OF PUBLIC SAFETY SERVICE
  - SUPPLIERS HAVE A NEW -- WINDOWS/WINDOW NT -- GENERATION OF EQUIPMENT
  - CARRIERS CAN UPGRADE NETWORKS IN WAYS THAT BOTH SERVE THE PUBLIC AND CREATE PLATFORMS FOR NEW REVENUES
  - NEW BUSINESSES ARE FORMING WHICH OFFER SERVICES FROM DATABASE/MSAG SUPPORT TO SUPPLEMENTARY CALLER INFORMATION WITH ANI/ALI

# GPS SOLUTION
BY
# GATCO

- IMPLEMENTATION WILL NOT REQUIRE:
  - CHANGES BY WIRELESS CARRIER
  - MAJOR CHANGES BY THE LECs
  - MAJOR CHANGES BY THE ALI DATABASE

# STATUS

- PHASE I WAS DUE BY MAY 1998
- PHASE II IS DUE JUNE 2001
- PHASE I WAS BARELY IMPLEMENTED BASED ON A LACK OF REQUESTS
- REASONS FOR DELAY:
  - LACK OF OR DELAY IN LEGISLATIVE ACTION TO EMPOWER FUNDING
  - SHORTCOMINGS OF INSTALLED TECHNOLOGY ON ALL SIDES: CARRIERS, PSAPS
  - LACK OF A MODEL ON HOW TO ACCOMPLISH IMPLEMENTATION -- DON'T BE FIRST (ALSO DELAYS COST RECOVERY PROGRESS)
- ANOTHER ISSUE: LIABILITY FOR WIRELESS CARRIERS
- GIVEN USUAL LONG PROCUREMENT CYCLES, THE PUBLIC SAFETY COMMUNITY NEEDS TO BEGIN PLANNING MIGRATION TODAY

# PROVIDERS

- LECS:
  - CONCERNS FOR INSTALLED BASE
  - ISSUE OF COST RECOVERY
  - IGNORED IN 94-102 BUT WILL BE IMPACTED
- WIRELESS CARRIERS:
  - PRIORITIES ARE ELSEWHERE AS THEY DEAL WITH DEPLOYMENT, GROWTH, COMPETITION (CREATING WINDOW FOR SCC AND XYPOINT)
  - TECHNOLOGY STANDARD FOR LOCATION
  - COST OF DEPLOYMENT OF LOCATION TECHNOLOGY
  - TIME INTERVAL AND RESOURCES REQUIRED TO IMPLEMENT A SOLUTION
  - LIABILITY

# PROVIDERS

- LOCATION TECHNOLOGY PROVIDERS:
  - PLAYING TO BOTH NENA AND CARRIERS
  - NETWORK BASED
    - ANGLE OF ARRIVAL (AOL)
    - TIME DIFFERENCE OF ARRIVAL (TDOA)
    - EACH HAS ADVANTAGES
    - CAPITAL REQUIREMENT IS SIGNIFICANT
  - DEVICE BASED
    - GPS
    - WHAT WILL BE STANDARD?

Some of the material used for this Presentation
has been graciously provided by RCC Consultants